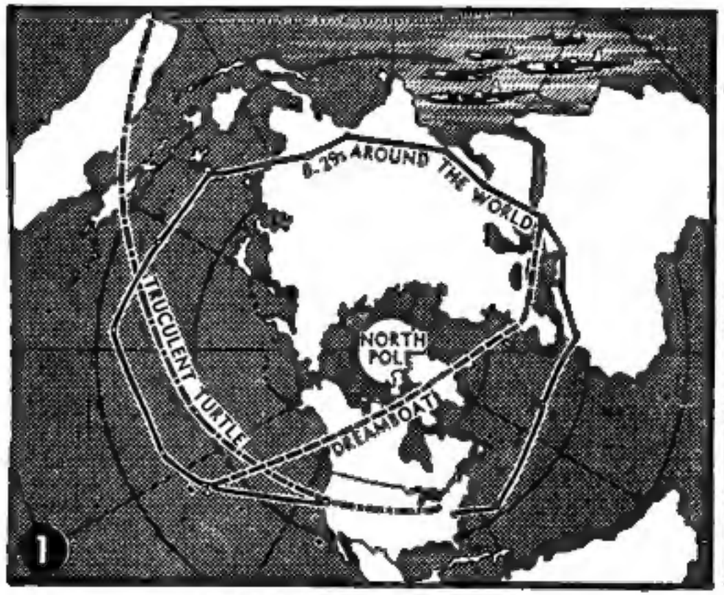
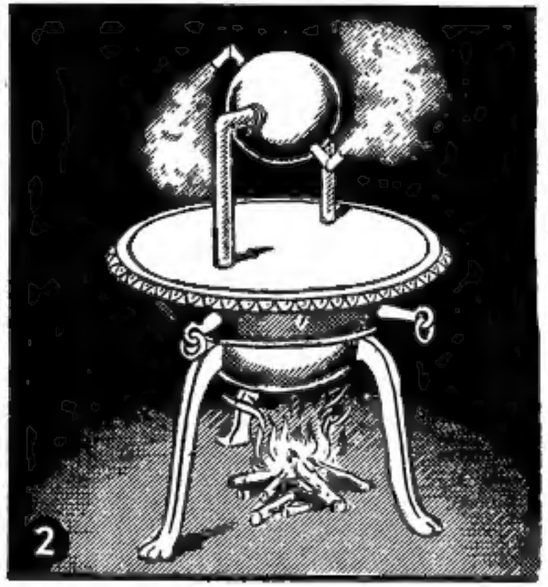
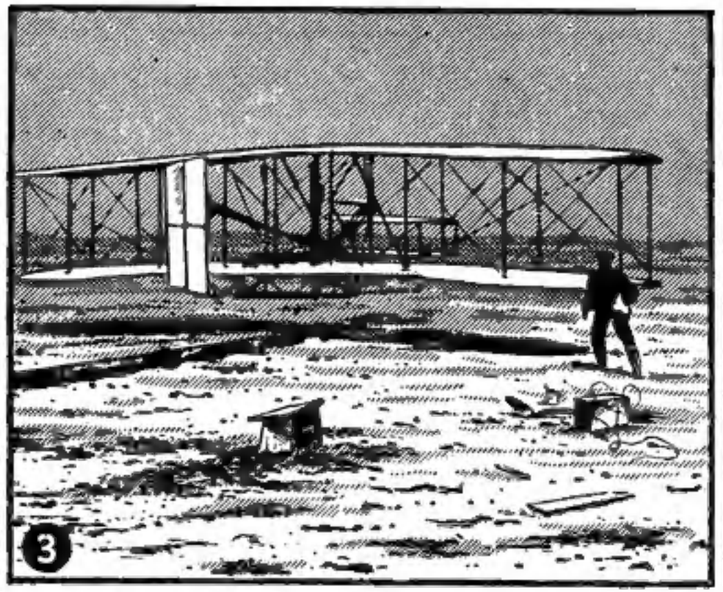
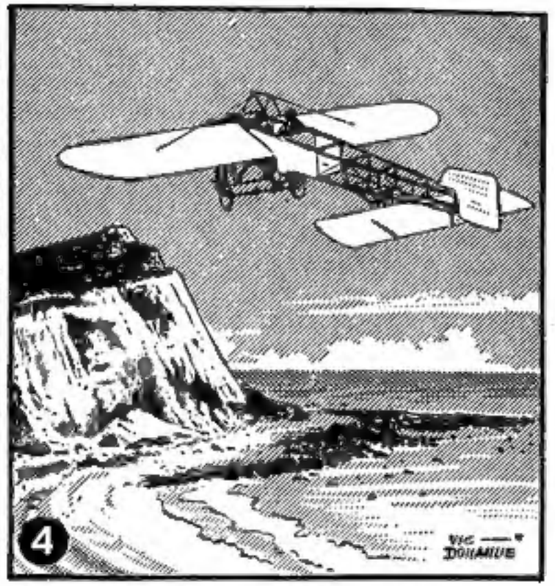
WINGS OF TOMORROW: The Story of Aviation—

No. 1: Climax of an Old Dream









BY CHARLES TRACY

Aviation editor, Cleveland Press; former Army pilot

(Written for NEA Service)

(1) The Army's big projected flight of B-29's around the world, the exploits of planes called Dreamboat and Truculent Turtle, talk of rocket flights to the Moon and waypoints all add up to the sure fact that we are soon to see the most fantastic chapter in the always sensational history of aviation. We are now to witness the climax of man's age-old ambition to conquer space. We have always envied the birds, and as far back as 1496 Leonardo da Vinci designed a flying machine with mechanical propulsion. Heroes 150 years ago were the Montgolfer brothers, who launched hot-air-filled balloons over France. The hydrogen balloon later became the dirigible with motor and rudder, but the first flight on home-made wings was made in 1855. Jean Marie Le Bris, French sea captain, glided an eighth of a mile in a machine patterned after an albatross. John J. Montgomery rode air currents over the hills of Otay, Cal., as America's first glider pilot, in 1884.

(2) The basic principle of jet propulsion, now revolutionizing aviation, was first demonstrated by Hero of Alexandria in 150 B. C. Hero constructed a hollow sphere with two opposing curved jets. Steam generated inside, escaping through the jets, made the sphere revolve. In 1680 Sir Isaac Newton proposed a jet propulsion method for driving a four-wheeled carriage, using steam. Air Commodore Frank Whittle of the British Royal Air Force developed the turbo-jet engines used in American and British fighters. The culmination of 14 years of secret research, his first kerosene-burning engine powered a British fighter in 1941. It was later given to the United States and reproduced by the General Electric Corp.

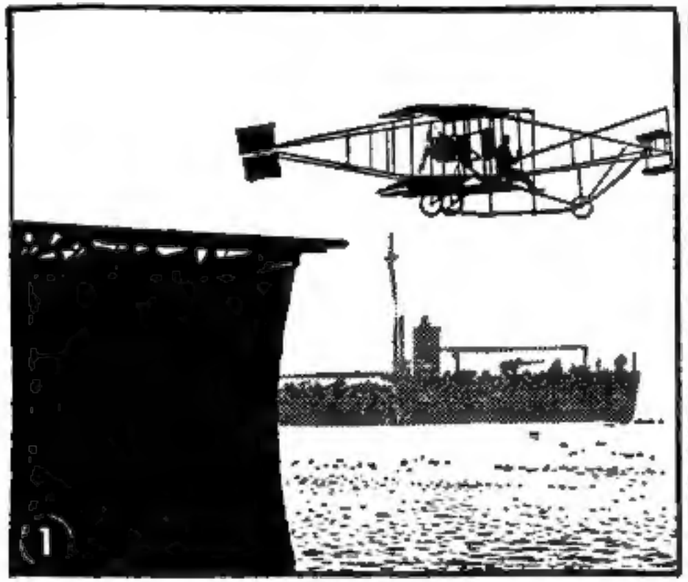
(3) A pair of broad, white wings arose from the sands of Kitty Hawk, N. C., on the bitterly cold morning of Dec. 17, 1903, to produce man's first successful flight in a power-driven airplane under full control. Orville Wright, the younger of Dayton's aviation-pioneering brothers, lay prone on the bottom wing, controlling the craft. Wilbur had won the toss of a coin and first chance at flying several days before, but his attempt had failed for lack of wind. The biplane, possessing a span of 40 feet, was powered by a 12-horsepower gasoline engine designed by the Wrights and connected by a bicycle chain to twin propellers. Data compiled during three years of glider flying and from study of an improvised turn-table type of wind tunnel were used in designing the plane.

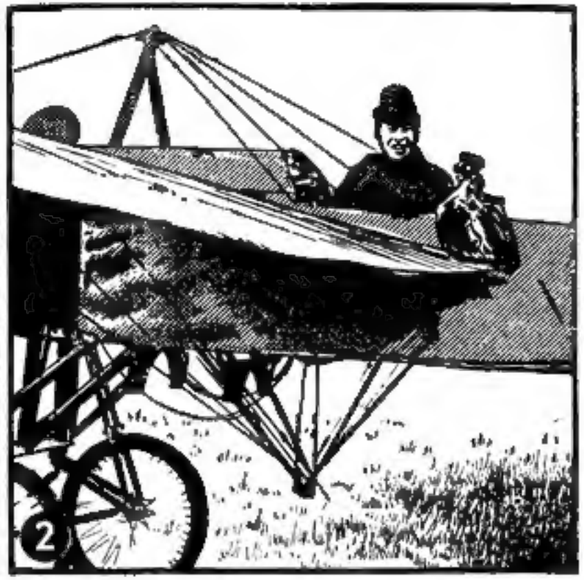
(4) Birdmen of other countries were quick to follow the success of the Wrights. Alberto Santos-Dumont, Brazilian ballonist, made the first successful flight in Europe, in 1906. Louis Bleriot in 1907 was the first to be successful with a monoplane and in 1909 proved its worth by crossing the English Channel. His flight was hailed by the world as a major accomplishment in aviation. Glenn H. Curtiss, American motorcycle racer turned aviator, opened the first flying school at Lake Keuka, Hammondsport, N. Y., in 1910, paving the way for rapid development of the airplane in the United States.

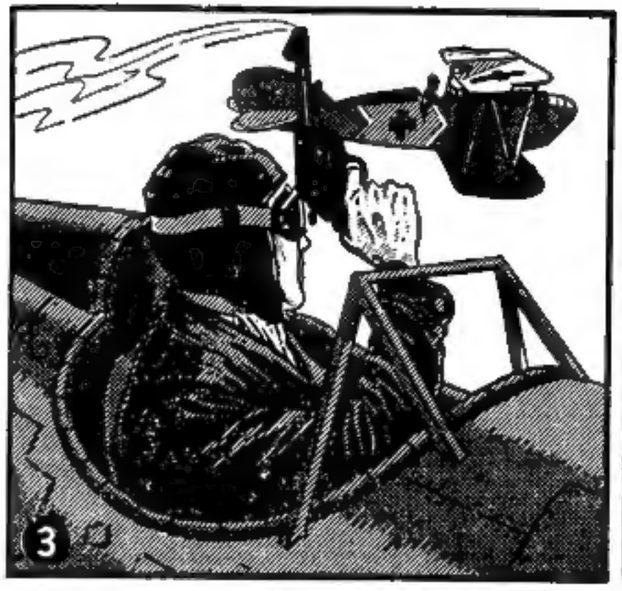
(TOMORROW: First Aerial Warfare.)

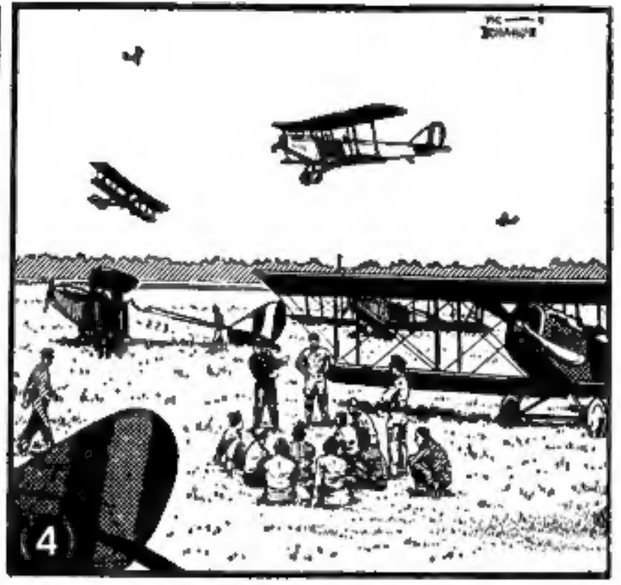
WINGS OF TOMORROW: The Story of Aviation—

No. 2: Flying to Fight









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(1) In the decade following the Wright brothers' success, air pioneers hastened to find practical uses for the new mode of transportation. The Wrights demonstrated their plane's possibilities as an express carrier in 1910 by flying 70 pounds of Rajar silk from Dayton to Columbus in Ohio. The shipping cost was $71.42 per pound! The Navy's proud aircraft carriers, so important in the recent war, had their inception in 1910, when Eugene Ely made the first shipboard take-off from the cruiser Birmingham at Hampton Roads. He completed the experiment the next year by landing on the battleship Pennsylvania in San Francisco.

(2) Transcontinental air travel, a routine 12-hour proposition rain or shine today, was a plodding, patience-exhausting task in 1911, when Robert C. Fowler first winged his way from San Francisco to Jacksonville in a few days less than five months. C. P. Rogers went from Brooklyn to Pasadena the same year in flying time of 84 hours, spending nearly two months on the way. Air mail was inaugurated by Earl Ovington in the Bleriot monoplane "Dragonfly," on a week's trial basis, between Nassau Boulevard and Mineola, Long Island, New York, in 1911.

(3) Man's wings became weapons as World War I engulfed Europe. Bombing raids by airplanes were carried out first over France and Belgium in 1914. Aerial warfare began when observation pilots dropped bricks on each other. But pistols, rifles and machine guns soon took to the air. Roland Garros, first French air fighter, in 1915 invented the synchronizing gear enabling a machine gun to shoot through the propeller. He downed five enemy planes in 18 days before he crashed behind enemy lines and his invention was captured.

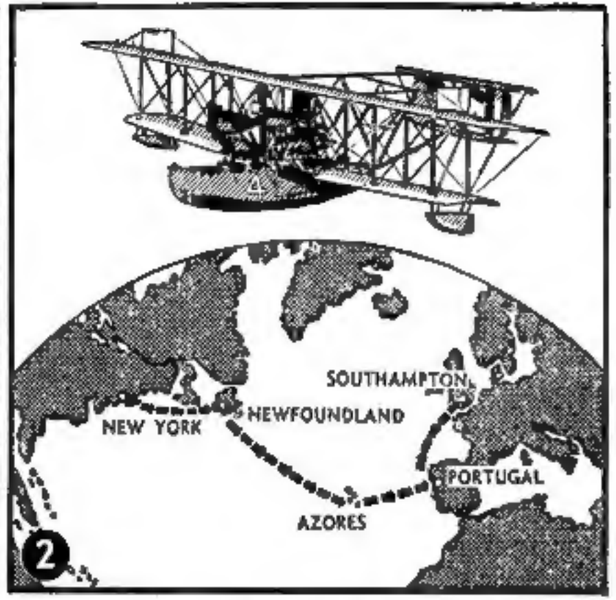
(4) Anthony Fokker, Dutch plane designer, offered his planes to the Allies, but his offer was refused because the importance of air power was underestimated. Later, his D-VII biplane and D-VIII triplane gave the German air force a definite advantage over such noted Allied craft as the French Spads and the British Sopwiths. The only American-built planes to see combat were British-designed DeHaviland 4's, powered by the famous American Liberty engine. A popular trainer for American pilots was the Curtiss "Jenny." American aces of the war were Capt. Eddie Rickenbacker, 26 victories; Frank Luke, 21 victories; and Raoul Lufbrey, 17 victories.

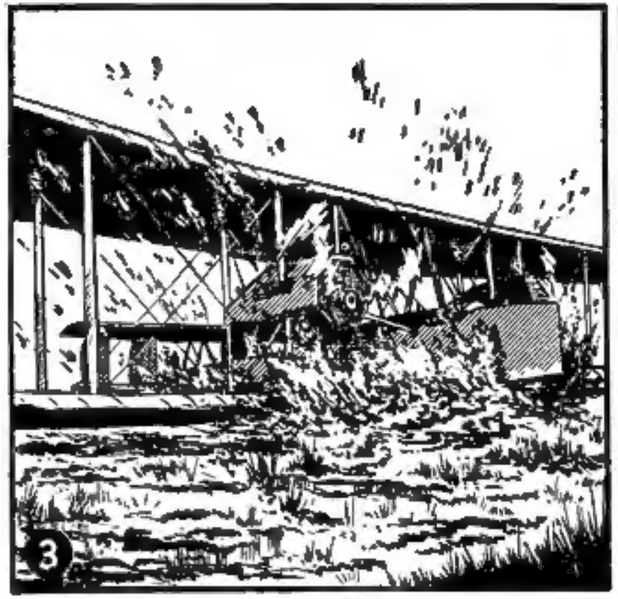
(TOMORROW: Across the Atlantic.)

WINGS OF TOMORROW: The Story of Aviation—

No. 3: Acrohh the Atlantic

MITCHELL'S TRIAL WILL START TODAY
MITCHELL IS FOUND GUILTY ON ALL COUNTS; FIVE YEAR SOSPENSION IS COURT VERDICT
MITCHELL RELEASED FROM ARMY SERVICE
MITCHELL OUT TODAY
1





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(Written for NEA Service)

(1) Four years of war changed the airplane from a flimsy, box-kite affair to a streamlined machine of destruction. Leaders saw its great potentialities as a weapon. New concepts of national defense were urged by Gen. Billy Mitchell, later court-martialed as a result of his outspoken views in favor of air power. Adventurous war heroes sought new fields to conquer with planes. DeHavilands were standard in the Army Air Service in 1918. They were put to use when the Army began carrying the first regular mail between Washington, D. C., and Long Island, N. Y.

(2) Forerunners of today's luxurious air liners were the Curtiss flying boats built for the U. S. Navy in 1918. The NC-1 established a world's record that year by lifting 50 passengers on a single flight. Along with the NC-3 and NC-4, the NC-1 began a trans-Atlantic flight in 1919. But the NC-4, under the command of Lieut. Albert C. Read, U. S. N., was the only plane successful in completing the trip from New York to Southampton, via Newfoundland, the Azores and Portugal, in 12 days.

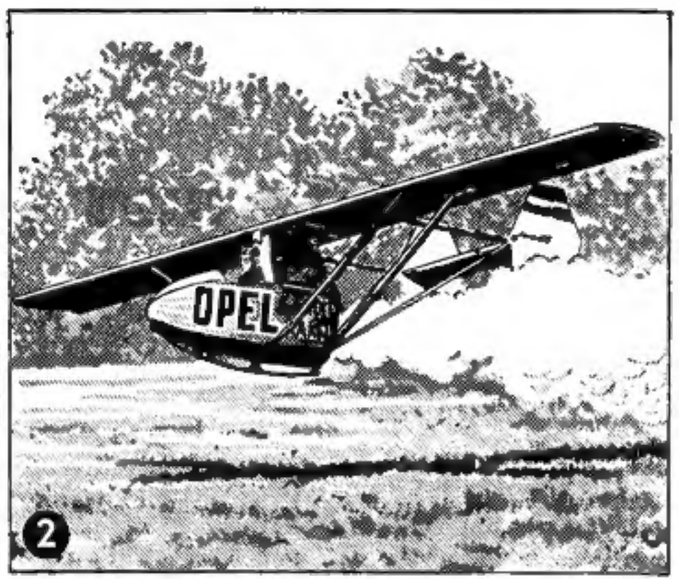
(3) First non-stop flight over the Atlantic was made in 1919 by Capt. John Alcock, British aviator, and Lieut. A. Whitten Brown, World War flyer, in a Vickers two-engine bomber. They covered 1936 miles from St. John's, Newfoundland, to Clifden, Ireland, in 16 hours and 12 minutes, landing in a swamp because they had dropped their landing gear after take-off. Four Army Douglas biplanes began their first globe-girdling flight the same year. Two of them finished the trip, in 175 days. Their actual flying time was 363 hours over the 26,345-mile route.

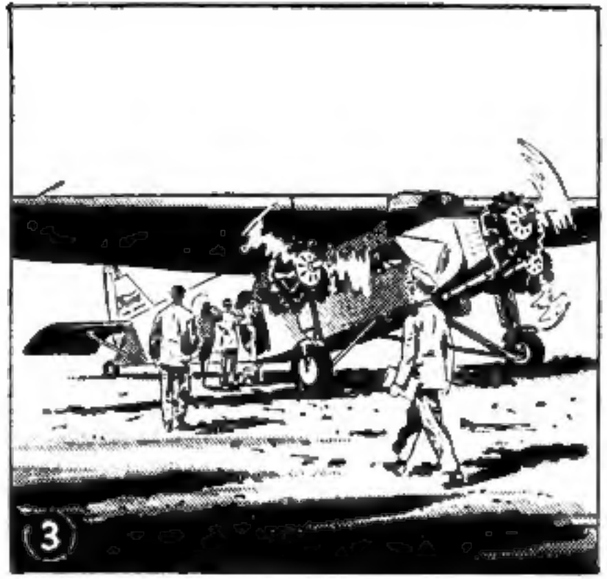
(4) Aviation captured the popular imagination in 1927, when one of the world's most famous flyers, Charles Augustus Lindbergh, aimed the nose of his Ryan monoplane toward Paris after staggering into the air at Roosevelt Field, L. I., under a heavy fuel load. After 33 hours and 39 minutes of battling fatigue and rough Atlantic weather, he landed at Paris, completing the first solo crossing of the treacherous route which has claimed the lives of many brilliant airmen.

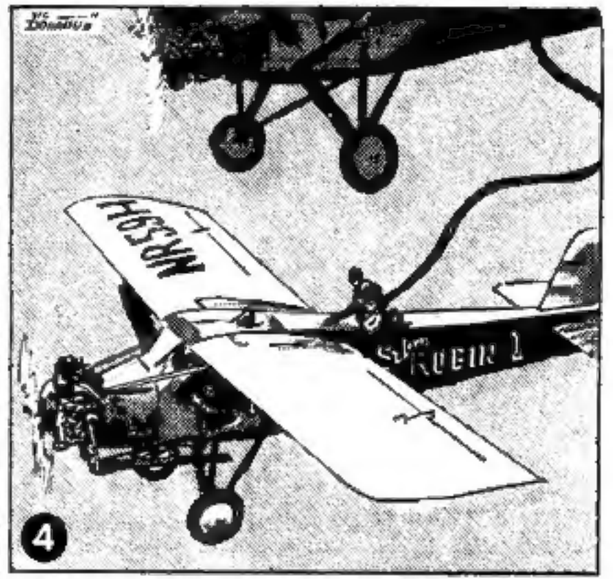
(TOMORROW: First Luxury Liners.)

WINGS OF TOMORROW: The Story of Aviation—

No. 4: First Luxury Liners







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(Written for NEA Service)

(1) Aviation reached one of its turning points with Lindbergh's sensational flight to Paris. New interest and new capital went into the aircraft industry. In Spain the following year, Juan de la Cierva test-hopped a new-type plane, the autogyro. Its rotating wings made it stall-proof and permitted it to descend almost vertically. A conventional engine and propeller powered it, but, contrary to popular belief, the rotors were not power-driven, although there was a clutch arrangement to start them turning prior to take-off.

(2) Fritz von Opel, German auto manufacturer who had been experimenting with rocket-powered cars, in 1929 applied similar propulsion ideas to a glider-type plane. He flew for two minutes near Frankfurt, Germany, becoming the first man to harness rocket propulsion for flight. Explosive powder was used in von Opel's rockets, greatly limiting the duration of flight. His plane's speed was no greater than that of the day's average planes.

(3) Commercial air lines had secured air mail contracts and were expanding passenger services by 1930. The Ford trimotor, first all-metal passenger plane, became the luxury liner of the airways. Designed by William B. Stout and built by Henry Ford, it could carry from 12 to 20 passengers at a speed of 120 m. p. h. Fokker and Stinson trimotors also were popular at the time. Air lines linked the east and west coasts on 24-hour schedules. Frank Hawks, noted speed pilot, crossed the continent in 12 hours and 35 minutes, then a west-to-east record, in his famous Travelair Mystery Ship.

(4) Improvements made during the '20s in planes and engines were impressively demonstrated by endurance flyers of the decade. Dale Jackson and Forrest O'Brien remained aloft over St. Louis in 1929 for 26 days, 23 hours, and 28 minutes in a Curtiss Robin monoplane. They refueled and changed spark plugs and engine oil in full flight. Long-distance flights focused wide attention on aviation. Clyde Pangborn and Hugh Herndon, interned by the Japanese while on a world flight, bargained with their captors and finally were permitted to take off in their single-engine Bellanca for a non-stop trans-Pacific flight. They dropped their landing-gear, to reduce drag on the 4860-mile trip. They were aloft 41 hours and 13 minutes.

(TOMORROW: Air Travel Comes of Age.)